

REMARKS

Claims 19 and 27 have been amended to specify that the holding polymer is present in the composition in an amount from about 0.04% to less than about 1.5% active, and that the holding polymer comprises a polymer as therein more particularly described. Claim 28 has been amended to improve the consistency of the text, in view of the amendment to claim 27. Claims 20 through 25 have also been amended to improve the consistency of the text. New claim 29 and 30 specify that the holding polymer consists essentially of the described polymer. See the specification at page 6, third full paragraph, and the Abstract.

In view of this amendment and the remarks that follow, allowance of the subject claims, as amended, is respectfully requested.

Pursuant to the Office Action of July 1, 2004, claims 19-25 were rejected under 35 U.S.C. §103(a) as unpatentable over Peffly (US 5,985,294) in view of Samain et al. (US 6,511,651) ("Samain") and Maurin et al. (US 6,403,542) ("Maurin").

As noted at page 3 of the application, while high concentrations of holding or fixative polymer have been used in hair styling compositions, such high polymer concentrations "will generate flaking due to easy elimination of the polymer from the hair by combing and brushing". However, as holding polymer concentrations are reduced to very low levels, desirable styling properties may not be retained. The inventors found that effective hair styling compositions can be formulated at low holding polymer concentrations using the described holding polymers and polysaccharides, when specific holding polymer to polysaccharide ratios are employed.

As shown by the data provided in Table 1, when the amount of vinyl caprolactam/methacrylamidopropyl dimethylamine/vinyl pyrrolidone terpolymer was maintained constant at a level of 1.25%, the curl retention properties of the resulting

compositions varied significantly depending upon the amount of hydroxyethyl cellulose that was present. Moreover, the curl retention properties did not remain constant or follow an additive linear progression. Instead, at this low level of terpolymer, a certain minimum amount of hydroxy ethyl cellulose was required to provide desirable curl retention (compare Examples A and E ((a) to (b) ratios of 1.0:0.1 and 1.0:0.2, respectively)). The Table 1 data also showed that as the hydroxy ethyl cellulose level increased, the holding performance of the compositions first increased and then decreased. The air dry data of Test 1 (6 hours) revealed the highest curl retention (in the 90% region) for Examples B and C ((a) to (b) ratios of 1.0:0.4 and 1.0:0.7 respectively), with a lower curl retention (83.8% and 83.3%, respectively) being shown for Examples G and H ((a) to (b) ratios of 1.0:1.6 and 1.0:1.9, respectively). In the air dry data of Test 1 (6 hours), Example I, which had an (a) to (b) ratio of 1.0:2.2, had a curl retention value of 80.1%. Thus, it was shown that styling compositions having both low levels of holding polymer and desirable curl retention properties could be produced using a combination of the terpolymer holding polymer and hydroxyethyl cellulose, and employing certain holding polymer to hydroxyethyl cellulose ratios.

It is respectfully submitted that compositions as described by claims 19 through 26 are not disclosed or suggested by Peffly in combination with Samain or Maurin. Peffly discloses any of numerous holding polymers, but fails to specifically teach a terpolymer of polyvinylpyrrolidone, vinylcaprolactam and dimethylaminopropyl dimethyl amine. Moreover, its disclosed range of hair styling polymer is extremely broad (from about 0.01% to about 20%). As demonstrated by the data in Table 1 of the subject application, very low levels of fixative polymer may not provide sufficient curl retention. Notwithstanding the range of fixative polymer recited by Peffly, the citation fails to provide an enabling disclosure as to how to achieve effective curl retention at the very low holding polymer levels of the subject claims (i.e., from about 0.04 to less than about 1.5% active). In fact, Example III of Peffly, an Example which contains 1.50% (active) of a PVP/VA copolymer and hydroxyethyl cellulose, additionally contains 2.00% weight of a second holding polymer, namely PVP. Thus, the composition described by this

Example exceeds the low holding polymer level required by the subject claims. Moreover, there is nothing in Peffly that would disclose to one skilled in the art that effective curl retention could be achieved at the low holding polymer levels of the subject claims by inclusion of hydroxyethyl cellulose and the employment of certain holding polymer to hydroxyethyl cellulose ratios.

Samain and Maurin fail to cure the deficiencies of Peffly. Neither citation discloses hydroxyethyl cellulose or provides any direction or teaching with respect to the claimed ratios. In fact, Maurin is directed to compositions for washing keratin materials (i.e., shampoos), as opposed to styling compositions.

Claims 27 and 28 were rejected under 35 U.S.C. §103(a) over Peffly, Samain, and Maurin, as such citations have been applied to claims 19-25, and in further view of US 5,753,216 ("Leitch"). None of Peffly, Samain and Maurin discloses a nonionic dextran as required by the subject claims. Leitch is directed to a hair care compositions containing a hair styling/conditioning copolymer solubilized or dispersed in a volatile silicone fluid, wherein the copolymer-volatile silicone fluid solution further comprises a nonvolatile plasticizer. At column 21, lines 57 to 67, Leitch discloses the use of certain water-soluble polymers as thickening agents; such polymers include Dextran purified crude Grade 2P, which is referred to in the last Office Action as a non-ionic dextran. There is, however, nothing in Leitch that discloses or suggests the use of this dextran together with a holding polymer as in claims 27 or 28 as a means of producing a styling composition having a low holding polymer content as described by the claims 27 and 28. Even if combined with Peffly, Samain, and Maurin, the combination fails to remedy this or the other deficiencies in the combination of these citations.

Accordingly, allowance of the subject claims, as amended, is respectfully requested. If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone her at the number provided.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Karen E. Klumas', is written over a horizontal line.

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